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111943

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: TRUNG, Duc Examiner #: 69332 Date: Jan 12, 2004
Art Unit: 1711 Phone Number 30 Serial Number: 6184, 866
Mail Box and Bldg/Room Location: 1571 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Structure of formula I. Thanks.

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	Type of Search	Vendors and cost where applicable
Searcher: _____	NA Sequence (#) _____	STN _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: _____	Litigation _____	Lexis/Nexis _____
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Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

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STRUCTURE FILE UPDATES: 12 JAN 2004 HIGHEST RN 636984-67-3
DICTIONARY FILE UPDATES: 12 JAN 2004 HIGHEST RN 636984-67-3

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

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Experimental and calculated property data are now available. For more
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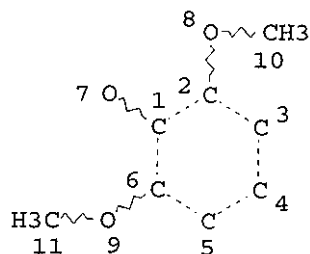
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FILE LAST UPDATED: 12 Jan 2004 (20040112/ED)

This file contains CAS Registry Numbers for easy and accurate
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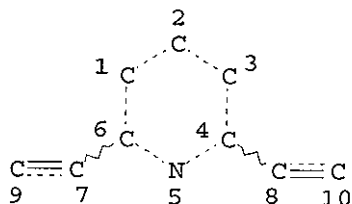
L1 SCR 2043
L3 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE
 L11 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE
 L14 4 SEA FILE=REGISTRY SSS FUL L1 AND L11 AND L3
 L15 3 SEA FILE=CAPLUS ABB=ON PLU=ON L14

=> d ti 1-3

L15 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 TI Polymers and dienes, their synthesis, and electronic devices incorporating same

L15 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 TI A novel fluorescent monomer for the selective detection of phenols and anilines

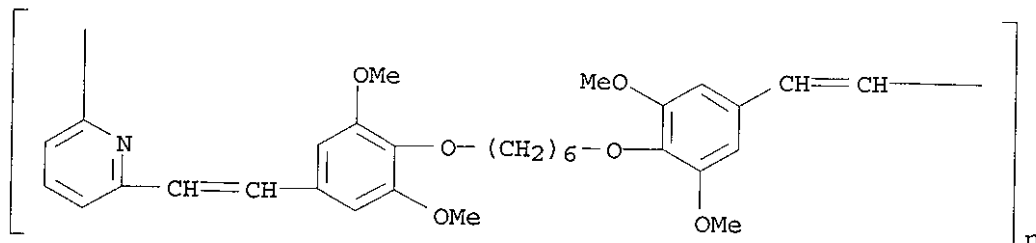
L15 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
TI Molecular imprinting via a novel mixed acetal linker for a fluorescent sensor

=> d ibib abs hitstr ind total 115

L15 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:716337 CAPLUS
DOCUMENT NUMBER: 137:248122
TITLE: Polymers and dienes, their synthesis, and electronic devices incorporating same
INVENTOR(S): Epstein, Arthur; Wang, Daike
PATENT ASSIGNEE(S): The Ohio State University, USA
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002072654	A2	20020919	WO 2002-US7420	20020312
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2002177637	A1	20021128	US 2002-84866	20020228
PRIORITY APPLN. INFO.:			US 2001-275443P	P 20010313
			US 2001-275762P	P 20010314
			US 2002-84866	A 20020228
AB	Polymers having RCH:CHR1CH:CHR groups [R = substituted phenylene or (substituted) pyridinediyl] in the backbone and RCH:CHR1CH:CHR [R = (substituted) quinolinyl, (substituted) pyridinyl, substituted Ph, or (substituted) naphthyl; R1 = (substituted) C6H4 or (substituted) pyridinediyl] are manufactured A typical polymer was manufactured by refluxing mixture containing 150 mL THF, 502 mg 1,6-bis(2,6-dimethoxy-4-carbonylphenoxy)hexane, 890 g 2,6-pyridinediylbis(triphenylphosphonium bromide), and 10 mL 2M KO-tert-Bu in THF.			
IT	460061-30-7P 460061-33-0P RL: IMF (Industrial manufacture); PREP (Preparation) (conjugated unsatd. aromatic polymers and divinylarylene compds. for electronic devices)			
RN	460061-30-7 CAPLUS			
CN	Poly[2,6-pyridinediyl-1,2-ethenediyl(3,5-dimethoxy-1,4-phenylene)oxy-1,6-			

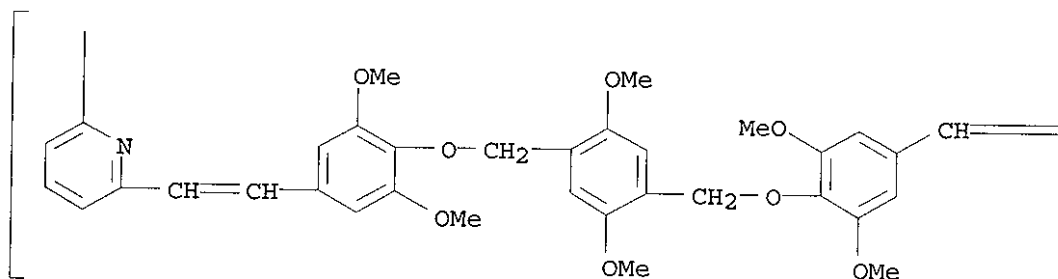
hexanediylloxy(2,6-dimethoxy-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)



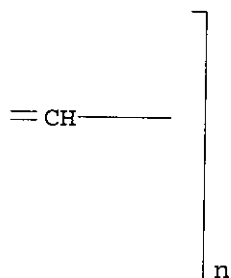
RN 460061-33-0 CAPLUS

CN Poly[2,6-pyridinediyl-1,2-ethenediyl(3,5-dimethoxy-1,4-phenylene)oxymethylene(2,5-dimethoxy-1,4-phenylene)methyleneoxy(2,6-dimethoxy-1,4-phenylene)-1,2-ethenediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM C08G

CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 76

ST polyaryleneethenylene manuf electronic device;
bisdimethylcarbonylphenoxyhexane pyridinediylbistriphenylphosphonium
bromide copolymer manuf

IT Electric apparatus

(conjugated unsatd. aromatic polymers and divinylarylene compds. for electronic devices)

IT Poly(arylenealkenylenes)
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (conjugated unsatd. aromatic polymers and divinylarylene compds. for electronic devices)

IT 2131-98-8P 3095-81-6P 6266-89-3P 24346-76-7P 51249-14-0P
 103046-42-0P 107758-51-0P 188970-59-4P 204185-75-1P 219144-52-2P
 289059-26-3P 289059-27-4P 460061-29-4P 460061-30-7P
 460061-32-9P 460061-33-0P 460061-34-1P 460061-35-2P
 460061-36-3P 460061-37-4P 460061-38-5P 460061-39-6P 460061-40-9P
 460061-41-0P 460061-42-1P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (conjugated unsatd. aromatic polymers and divinylarylene compds. for electronic devices)

IT 66-99-9, 2-Naphthaldehyde 86-51-1, 2,3-Dimethoxybenzaldehyde 123-11-5,
 p-Anisaldehyde, reactions 872-85-5, 4-Pyridinecarboxaldehyde
 1122-72-1, 6-Methyl-2-pyridinecarboxaldehyde 1519-47-7,
 1,4-Xylylenebis(triphenylphosphonium chloride) 2103-57-3,
 2,3,4-Trimethoxybenzaldehyde 4363-93-3, 4-Quinolinecarboxaldehyde
 5470-96-2, 2-Quinolinecarboxaldehyde 10273-64-0 61973-87-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (divinylarylene compound precursor; conjugated unsatd. aromatic polymers and divinylarylene compds. for electronic devices)

L15 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:268758 CAPLUS

DOCUMENT NUMBER: 131:13121

TITLE: A novel fluorescent monomer for the selective detection of phenols and anilines

AUTHOR(S): Reppy, Mary A.; Cooper, Martin E.; Smithers, Juston L.; Gin, Douglas L.

CORPORATE SOURCE: Department of Chemistry, University of California, Berkeley, CA, 94720-1460, USA

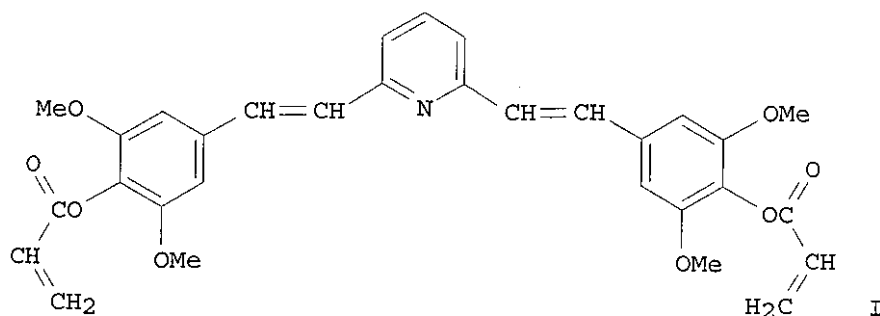
SOURCE: Journal of Organic Chemistry (1999), 64(11), 4191-4195
 CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB The authors have developed a new polymerizable fluorescent probe, 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine (I), that is quenched selectively by aromatic alcs. and amines, even in the presence of their aliphatic analogs, oxygen, and water. This selective quenching occurs with I dissolved in nonpolar solvents such as benzene or crosslinked inside a polymethacrylate matrix. Monomer I contains a central pyridine ring similar to C. V. Kumar's fluorophore (1993, 1994). However, it has a different conjugated core architecture and can also participate in radical copolymns. with conventional monomers. This novel fluorophore architecture leads to a different mechanism of fluorescence quenching from that of Kumar's fluorophore and also to a high degree of analyte selectivity.

IT **225642-49-9P**, 2,6-Bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine-ethylene glycol dimethacrylate copolymer
 RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
 (preparation for the selective detection of phenols and anilines by fluorescence quenching)

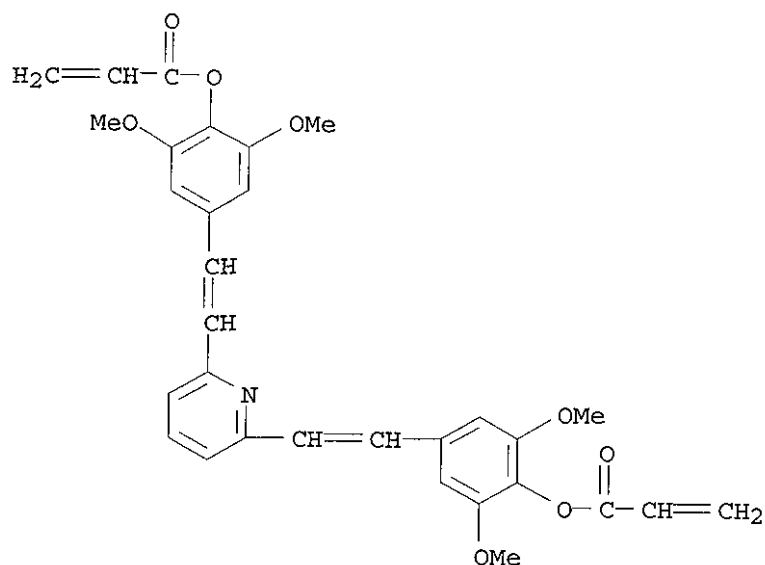
RN 225642-49-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with 2,6-pyridinediylbis[2,1-ethenediyl(2,6-dimethoxy-4,1-phenylene)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 188646-84-6

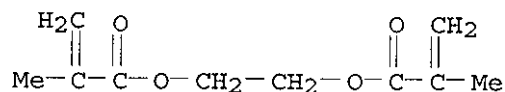
CMF C31 H29 N O8



CM 2

CRN 97-90-5

CMF C10 H14 O4



CC 80-3 (Organic Analytical Chemistry)

Section cross-reference(s): 25, 37

ST bisacryloldimethoxyphenylvinylpyridine fluorescent probe phenol aniline selective detection

IT Amines, analysis

RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)

(aromatic; preparation and NMR and use of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine for selective detection of phenols and anilines by fluorescent quenching)

IT Solvent effect

(on fluorescent quenching of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine)

IT Fluorescence quenching

(preparation and NMR and use of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine for selective detection of phenols and anilines by fluorescent quenching)

IT Phenols, analysis

RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)

(preparation and NMR and use of 2,6-bis[2-(4-acryloyl-3,5-

- dimethoxyphenyl)vinyl]pyridine for selective detection of phenols and anilines by fluorescent quenching)
- IT 62-53-3, Benzenamine, analysis 100-61-8, N-Methyl aniline, analysis 106-44-5, analysis 108-39-4, analysis 108-44-1, m-Toluidine, analysis 108-95-2, Phenol, analysis 120-72-9, Indole, analysis 121-69-7, analysis
- RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine for selective detection of phenols and anilines by fluorescent quenching)
- IT 97-90-5, Ethylene glycol dimethacrylate
- RL: RCT (Reactant); RACT (Reactant or reagent)
(copolymer with 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine)
- IT 64-17-5, Ethanol, analysis 75-65-0, analysis 100-51-6, Benzyl alcohol, analysis 108-93-0, Cyclohexanol, analysis 109-73-9, Butylamine, analysis 111-92-2, Dibutylamine 121-44-8, analysis
- RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)
(fluorescent quenching of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine by)
- IT 64-19-7, Acetic acid, analysis 67-56-1, Methanol, analysis 67-64-1, 2-Propanone, analysis 67-68-5, DMSO, analysis 78-93-3, 2-Butanone, analysis 100-66-3, Anisole, analysis 111-31-9, Hexanethiol
- RL: ARU (Analytical role, unclassified); PRP (Properties); ANST (Analytical study)
(fluorescent quenching of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine by)
- IT 7703-74-4P, 2,6-Bis(bromomethyl)pyridine
- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in preparation of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine)
- IT 61973-87-3P, 2,6-Bis(diethoxyphosphorylmethyl)pyridine 106852-80-6P, 4-tert-Butyldimethylsilyloxy-3,5-dimethoxybenzaldehyde 225642-47-7P, 2,6-Bis(2-(4-hydroxy-3,5-dimethoxyphenyl)vinyl)pyridine
- RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and NMR and reaction in preparation of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine)
- IT 188646-84-6P, 2,6-Bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine
- RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation and NMR and use of 2,6-bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine for selective detection of phenols and anilines by fluorescent quenching)
- IT 225642-49-9P, 2,6-Bis[2-(4-acryloyl-3,5-dimethoxyphenyl)vinyl]pyridine-ethylene glycol dimethacrylate copolymer
- RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation for the selective detection of phenols and anilines by fluorescence quenching)
- IT 814-68-6, 2-Propenoyl chloride
- RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with 2,6-Bis(2-(4-hydroxy-3,5-dimethoxyphenyl)vinyl)pyridine)
 IT 122-52-1, Triethyl phosphite
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with 2,6-Bis(bromomethyl)pyridine)
 IT 1195-59-1, 2,6-Pyridinedimethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with hydrobromic acid in acetic acid)
 IT 18162-48-6, tert-Butyldimethylsilyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with syringaldehyde)
 IT 134-96-3, Syringaldehyde
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with tert-butyldimethylsilyl chloride)
 REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1998:531712 CAPLUS
 DOCUMENT NUMBER: 129:310123
 TITLE: Molecular imprinting via a novel mixed acetal linker
 for a fluorescent sensor
 AUTHOR(S): Reppy, Mary A.; Gin, Douglas L.
 CORPORATE SOURCE: Department of Chemistry, University of California,
 Berkeley, CA, 94720, USA
 SOURCE: Polymer Preprints (American Chemical Society, Division
 of Polymer Chemistry) (1998), 39(2), 386-387
 CODEN: ACPPAY; ISSN: 0032-3934
 PUBLISHER: American Chemical Society, Division of Polymer
 Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Some work was done incorporating imprinting polymers in sensors. The authors are studying the incorporation of a fluorescent event, thus creating a fluorescent sensor for the analyte. β -Estradiol was chosen to be used in an imprinting approach that a combination of the ionic and covalent methods. The β -estradiol converted into β -estradiol/HEMA acetal (I) at the 17-hydro group of the estradiol. The chosen fluorophore was a pyridine-based fluorophore-diacrylate (II) previously developed in the authors' group. II quenched by phenolic species in solution and can form an acid-base complex with the phenol group on β -estradiol. Incorporation of fluorophore into the polymer as an acid-base complex with I creates a 2nd binding site in the cleaved polymer for the phenolic group of the β -estradiol and may allow the fluorescent detection of binding. The results can be used for developing a fluorescent sensor for β -estradiol.

IT 214463-49-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(imprinting polymer using novel mixed acetal linker for fluorescent
sensor for β -estradiol)

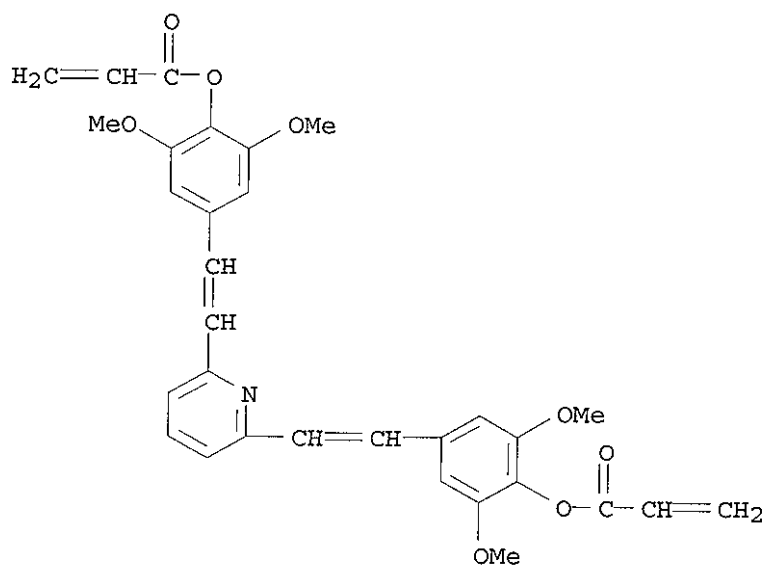
RN 214463-49-7 CAPLUS

CN 2-Propenoic acid, 1,2-ethanediyl ester, polymer with 2,2'-azobis[2-
methylpropanenitrile] and 2,6-pyridinediylbis[2,1-ethenediyl (2,6-dimethoxy-
4,1-phenylene)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 188646-84-6

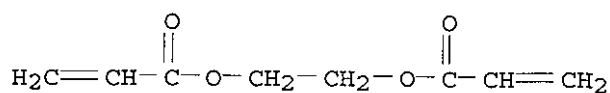
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CRN 2274-11-5

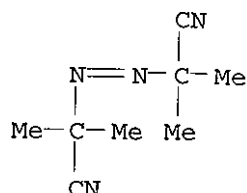
CMF C8 H10 O4



CM 3

CRN 78-67-1

CMF C8 H12 N4



- CC 80-2 (Organic Analytical Chemistry)
Section cross-reference(s): 32, 37
- ST estradiol acetal deriv imprinting polymer sensor; fluorescent sensor
imprinting polymer estradiol detn
- IT Optical sensors
(fluorometric; mol. imprinting via novel mixed acetal linker for
fluorescent sensor for β -estradiol)
- IT 214463-49-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(imprinting polymer using novel mixed acetal linker for fluorescent
sensor for β -estradiol)
- IT 50-28-2, β -Estradiol, analysis
RL: ANT (Analyte); RCT (Reactant); ANST (Analytical study); RACT (Reactant
or reagent)
(mol. imprinting via novel mixed acetal linker for fluorescent sensor
for β -estradiol)
- IT 188646-84-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(mol. imprinting via novel mixed acetal linker for fluorescent sensor
for β -estradiol)
- IT 214463-48-6P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(mol. imprinting via novel mixed acetal linker for fluorescent sensor
for β -estradiol)
- IT 67-66-3, properties 71-43-2, Benzene, properties 110-82-7,
Cyclohexane, properties 2189-60-8, Octyl benzene
RL: PRP (Properties)
(porogen in preparation of imprinting polymer using novel mixed acetal
linker for fluorescent sensor for β -estradiol)
- REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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